

*A1*  
*COO4*

12. The method of claim 11, wherein the pathogen is one of HIV, specific *E. coli* strains, *Salmonella species*, and *Haemophilus species*.

*A2*

23. The method of claim 3, wherein the fluorescent indicator is at least one of SYBR® Green I; thiazole orange; ethidium bromide; pico green; acridine orange; quinolinium 4-[(3-methyl-2(3H)-benzoxazolylidene) methyl]-1-[3-(trimethylammonio) propyl]-diiodide; quinolinium 4-[(3-methyl-2(3H)-benzothiazolylidene) methyl]-1-[3-(trimethylammonio) propyl]-diiodide; and chromomycin A3.

*A3*

25. The method of claim 3, wherein the sample is at least one of whole blood, a tissue biopsy, bone marrow, semen, sputum, urine, amniotic fluid, sperm, hair, skin, and cultured cells.

*A4*

36. The method of claim 28, wherein the presence of a given target polynucleotide indicates the presence of a pathogen, wherein the pathogen is one of a virus, a prokaryote, and a eukaryote.

37. The method of claim 36, wherein the pathogen is one of HIV, specific *E. coli* strains, *Salmonella species*, and *Haemophilus species*.

*A5*

48. The method of claim 28, wherein the fluorescent indicator is at least one of SYBR® Green I; thiazole orange; ethidium bromide; pico green; acridine orange; quinolinium 4-[(3-methyl-2(3H)-benzoxazolylidene) methyl]-1-[3-(trimethylammonio) propyl]-diiodide; quinolinium 4-[(3-methyl-2(3H)-benzothiazolylidene) methyl]-1-[3-(trimethylammonio) propyl]-diiodide; and chromomycin A3.

FINNEGAN  
HENDERSON  
FARABOW  
CARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
[www.finneganz.com](http://www.finneganz.com)

A6

50. The method of claim 28, wherein the sample is at least one of whole blood, a tissue biopsy, bone marrow, semen, sputum, urine, amniotic fluid, sperm, hair, skin, and cultured cells.

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
[www.finnegan.com](http://www.finnegan.com)